AN ASSESSMENT OF RADON AWARENESS: REACHING MORE MINORITY AND LOW-INCOME COMMUNITIES

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INTRODUCTION

"Wanda and Lance were happy to learn a new way to live in harmony with nature."[1]

This is how ***Learning About Radon: A Part of Nature*** cheerfully concludes, after describing how two Native American children — Wanda Grey Wolf and Lance Two Elk — have their homes tested for radon. ***Learning About Radon*** is part of an outreach effort targeting minority communities about radon, an invisible, colorless, odorless, radioactive gas. The publication reflects a growing appreciation for more effectively communicating with diverse populations about the hazards of radon.

This ASTHO report addresses the same theme by discussing outreach strategies for minority and low-income populations which are used in public health programs and state radon awareness programs. Through this report, ASTHO seeks to promote expanded radon outreach by encouraging cross-fertilization of outreach strategies.

ABOUT RADON

Radon gas is the result of natural breakdown of radium, which is formed from the radioactive decay of uranium. Both radium and uranium are solid radioactive elements found in nature. Radon moves up through the ground and can enter structures through cracks and other tiny openings. For a given amount of radon, half of it will decay over 3.8 days, forming several products known as radon progeny or radon "daughters." These progeny also decay rapidly, and emit radiation in the process. Radon progeny have half-lives measured in minutes or less, and are more chemically reactive than radon. Whether attached to airborne particles or unattached, the progeny attach to lung tissue when inhaled, emitting radiation in the lungs which can damage cells and may cause cancer in the lung tissue.

For many years it has been known that radon progeny increase the risk of lung cancer among underground miners. Epidemiological studies of miners working in atmospheres rich in radon such as uranium mines have consistently shown increased rates of lung cancer. The radon health hazard in homes was identified in 1984, when a worker at a nuclear power plant site set off the radiation warning system while entering a job site. The source of the radiation he brought to the job was found to be radon from his home.

The U.S. Environmental Protection Agency (EPA) has designated radon as a known human carcinogen. EPA estimates that radon exposure causes 7000 to 30,000 deaths each year, with the greatest non-occupational exposure to radon occurring inside homes. **In the United States, radon is estimated to be second only to cigarette smoking as the leading cause of lung cancer**. Several scientific studies have concluded that radon causes up to 15 percent of all lung cancers. According to one such study released in 1988 by the National Academy of Sciences (NAS) Committee on the Biological Effects of Ionizing Radiations (BEIR IV), entitled ***Health Risks of Radon and Other Internally Deposited Alpha Emitters***, radon acts synergistically with cigarette smoke in increasing the risks of lung cancer. Smokers and ex-smokers are estimated to be 10 to 20 times more likely to develop lung cancer than those who never smoked.[2]

Home Mitigation

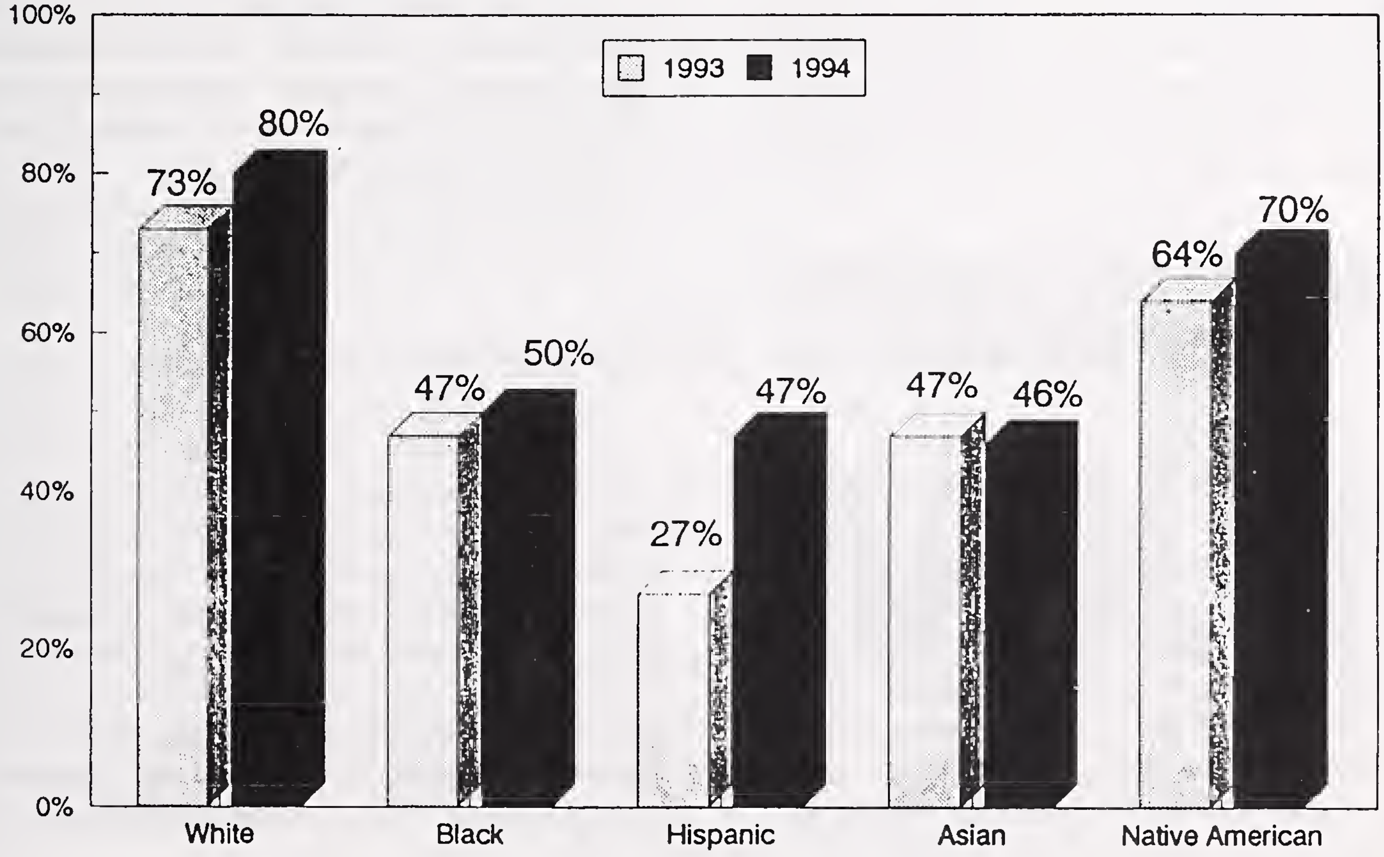
Radon has been found in all states. EPA's Radon Division classifies counties in the nation as either Zone 1, 2, or 3, based on the average radon concentrations found in homes. The presence of radon is measured in units of radioactivity, picocuries per liter (pCi/L) of air. Zone 1 is the highest, with homes and other buildings having a predicted average indoor screening level greater than four pCi/L of radon. Zone 2 areas have a predicted average indoor screening level between two and four pCi/L, and the levels in Zone 3 areas are generally less than two pCi/L.

Radon in a structure can be measured by a test kit which is either EPA-approved or state-certified. EPA has determined that mitigation (intervention to reduce the level of radon concentration indoors) is warranted if testing indicates levels are 4 pCi/L or higher. If the concentration of radon exceeds EPA's guideline level (4 pCi/L), home mitigation is recommended.

Mitigation methods include sealing cracks, readjusting the air flow indoors, and active subslab depressurization (running pipes through a basement's concrete slab and up to a fan that vents the radon gas outdoors) to reduce concentration. Some methods prevent radon from entering the home in the first place, while others reduce radon levels after it has entered. EPA generally recommends the former of these options. Mitigation costs and success rates vary, depending on such factors as the house's size, design, and radon levels. The costs of mitigation can range anywhere from $500 to $2500, with some methods (e.g., active subslab depressurization) estimated to reduce radon by as much as 99 percent.

Radon Awareness Demographics

(From conference of Radiation Control Program Directors Radon Risk Communication and Results Study)



Radon Awareness Levels

According to 1994 survey results of the Conference of Radiation Control Program Directors (CRCPD), 80 percent of the general population is aware of radon and 11 percent have actually tested for it. In minority communities, however, while seventy percent of Native Americans are aware of radon, only 14 percent have tested for it; fifty percent of African Americans are aware of radon, and 11 percent have done testing; 47 percent of Hispanics are aware of radon, six percent have done testing; and 46 percent of Asians are aware of radon, six percent have done testing.[3]

Gaps in radon awareness are addressed in ***Healthy People 2000: National Health Promotion and Disease Prevention Objectives***, the consensus report issued in 1990 by the United States Department of Health and Human Services (HHS) with considerable input from state health agencies. The report is a guidepost for planning and policy development at the state level and outlines national health promotion and disease prevention goals for the year 2000. ***Healthy People 2000*** proposes a comprehensive approach to improving the nation's health, including goals for reducing environmental health risks. Over 100 of its objectives target the needs of minority populations, including appropriate access to health care services and information. ***Healthy People 2000*** sets a goal of 50 percent increase in radon testing for homes inhabited by smokers and former smokers, because of the amplified threat of lung disease posed by a combination of smoking and radon. The report sets the same goal for homes with children, who may be more susceptible than adults to the carcinogenic effects of radiation. ***Healthy People 2000*** risk reduction goals for radon include:

> *"Increase to at least 40 percent the proportion of homes in which homeowners/occupants have tested for radon concentrations and that have either been found to pose minimal risk or have been modified to reduce risk to health."*

The baseline for this objective is that, in 1989 data released by EPA, less than five percent of homes were tested for radon. According to data for the ***Healthy People 2000*** midcourse review, recently published in ***The Journal of the American Medical Association***, this number has increased to 11.4 percent, one-fourth of the overall goal.[4]

STATE ENVIRONMENTAL HEALTH PROGRAMS

State health agencies play a crucial role in achieving national health goals. They are responsible for health policy planning and program development at the state level, assessing health needs of communities, developing programs and policies which target those needs, and assuring that communities have resources to address specific health risks. State health agencies vary in terms of organization, leadership and priorities. While some state health agencies are organizationally combined with environmental functions, in many states public health and environmental authority is located in separate agencies.

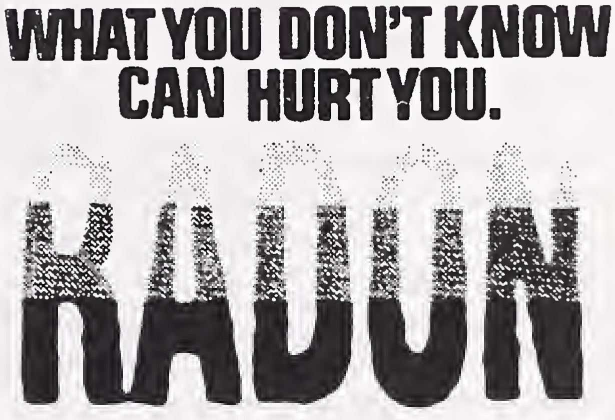
This state-to-state variability adds complexity to the task of monitoring and addressing health problems related to environmental exposures, such as radon. The separation between public health and environmental health functions in state agencies contributes a number of disadvantages. According to ***The Environmental Web***, a 1994 report published by the United States Public Health Service, environmental health activities (as distinguished from environmental regulation) have often been marginalized and deprived of needed resources for an effective, organized, and sustained public health effort.[5]

According to a landmark 1988 report by the Institute of Medicine (IOM) about the delivery and organization of public health services, ***The Future of Public Health***, state environmental health divisions could especially benefit from collaborative approaches with public health programs. According to IOM, National Academy of Sciences, environmental health programs are "frequently isolated from state and local public health agencies, resulting in disjointed policy development, fragmented service delivery, lack of accountability, and a generally weakened public health effort." The IOM report also notes that separation of health and regulatory programs affects the priorities and activities of state health agencies, and indicates that divisions between health and environment have seriously compromised environmental health risk communication with communities. The IOM asserts that as a result, health implications of environmental hazards have not received the depth of analysis or the level of support they deserve.[6]

The Future of Public Health also discusses the possibilities of improving internal linkages between state health agency divisions to fulfill the overall mission of the agency. Benefits of linkages include the potential to collaborate with health programs having proven track records of serving targeted high-risk populations, sharing and utilizing each other's expertise and knowledge, and assuring a more efficient use of state resources for common constituencies. State-level linkages create stronger health programs.

State Role in Radon

State programs play a pivotal role in reducing health risks posed by radon. The responsibilities of these programs vary from state to state, depending on radon levels, resources available, and legislative mandates. Each state radon program serves as the premier statewide vehicle for coordinating testing and mitigation activities. Approximately two-thirds of the state radon programs are located in public health agencies, with the remaining third in either environmental agencies or agencies combining both functions. Examples of state radon program responsibilities include increasing public awareness of radon's health hazards, identifying high-risk areas, providing financial support and technical assistance to local radon control efforts, operating hotline services, designing and implementing radon testing certification requirements, coordinating mitigation activities at schools, and developing radon-resistant building standards. As part of the Indoor Radon Abatement Act of 1988, EPA was directed to assist states with radon program development, including matching funds known as State Indoor Radon Grants. In 1992, for example, EPA provided $9 million to states for public awareness and survey programs.



EPA'S ROLE IN RADON

EPA was created in 1970 as an independent federal agency to consolidate major environmental programs under one umbrella and provide national environmental leadership. EPA uses research, monitoring, standard-setting, and enforcement capabilities to promote and protect the quality of both the environment and public health.

EPA's Radon Division was created in 1985 in the agency's Office of Air and Radiation to reduce exposure and risk of lung cancer from radon. The Radon Program has developed into an organized partnership of government agencies and private organizations working together on numerous fronts to increase public awareness of radon as a health hazard and to reduce the risks of radon in homes.

EPA's strategy to prevent long-term health problems associated with radon has been to increase awareness of the radon risk, increase testing of homes, and increase mitigation efforts to reduce radon levels inside homes. The program works cooperatively with state health and environmental agencies and private organizations to disseminate accurate information about radon and its potential dangers to human health, the need to test homes for radon, and how exposure to it can be effectively reduced. This "organized partnership" has helped advance public awareness of radon. EPA's Radon Division provides guidance, funding, and other support to state-level radon programs that work with communities to bolster awareness and conduct projects to mitigate radon exposure in homes.

Radon Awareness Outreach Needs and Environmental Equity

Environmental equity, as defined in EPA's ***Guide to Environmental Issues***, is the equal protection from environmental hazards for individuals, groups, or communities regardless of race, ethnicity, or economic status.[7] The issue first received national attention in 1982, as the result of protests involving a North Carolina polychlorinated biphenyl (PCB) landfill proposed for location in a predominantly African American low-income community. President Clinton gave the equity issue higher profile when he signed Executive Order 12898 entitled ***Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Communities***, requiring all federal agencies to help ensure that minority populations are not disproportionately exposed to environmental dangers.[8] Carol Browner, EPA Administrator, announced in a statement on environmental equity, "We cannot say that we have adequate environmental protection in this country unless we can guarantee that those at greatest risk are protected. We cannot afford not to provide environmental equity for all Americans."[9]

The EPA Office of Environmental Equity is now charged with resolving environmental problems affecting people of color and low-income communities. Deeohn Ferris, former Environmental Quality Director for the National Wildlife Federation, challenged the EPA to improve outreach efforts when writing, "Latinos, Native Americans, Asian Pacific Islanders, Chinese Americans, other people of color, and people with low incomes constitute the broadest and most complex constituency that the Agency has to serve.... Remedying this disparity is the foremost challenge that the Agency confronts."[10]

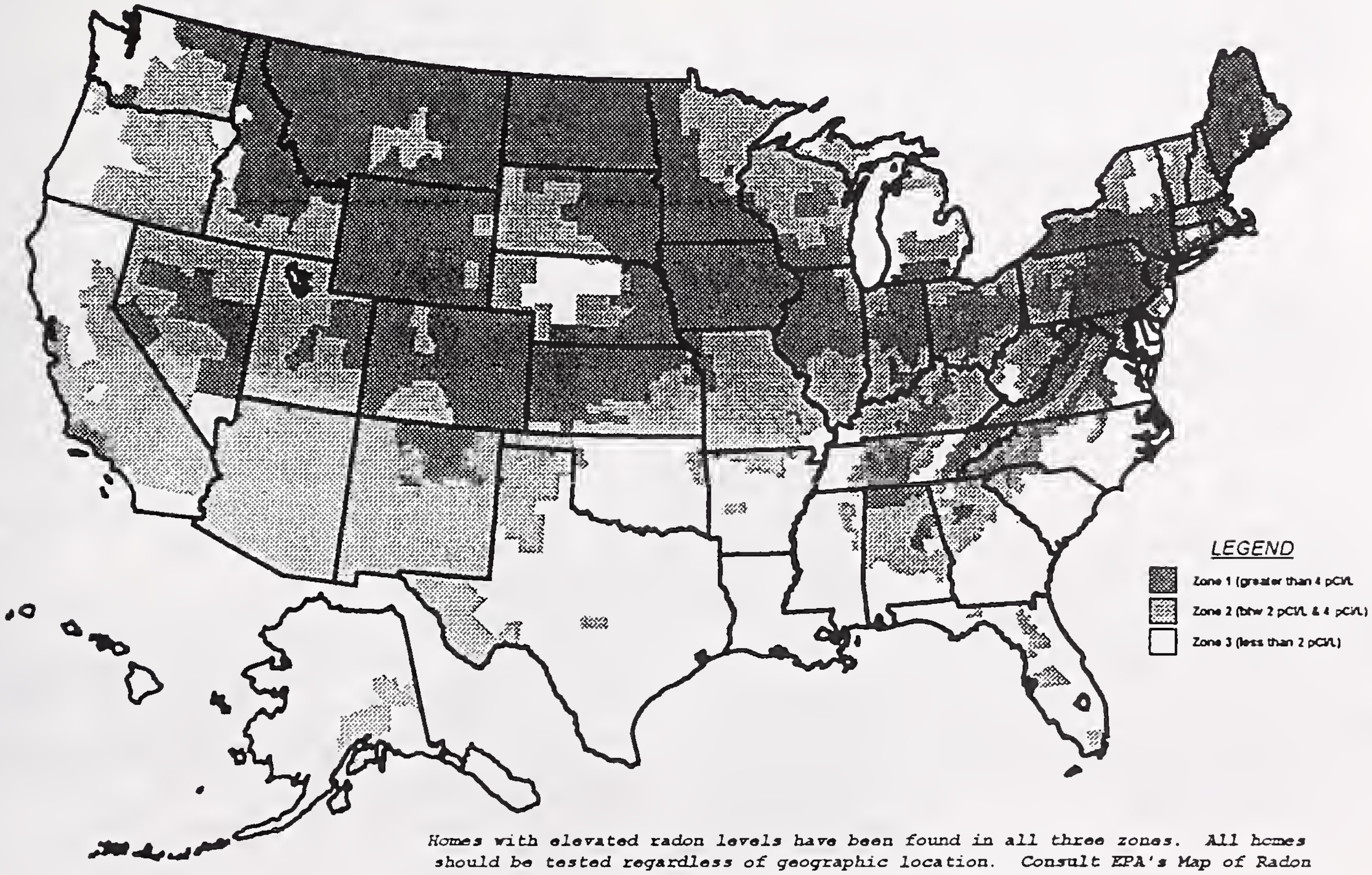
In 1993, the Radon Division prepared a report ***Environmental Equity and Radon: A Strategy for Risk Reduction*** that identifies disparities in radon awareness and outreach activities and concludes that much remains to be done in reducing risks in minority and low-income communities. The Radon Division has responded by developing a number of new partnerships, described later in this report, and by establishing an Environmental Equity Team.[11]

The EPA Radon Division mission statement makes a formal commitment to addressing environmental health disparities by increasing radon awareness, testing, and mitigation in low-income communities and among minority populations. The Radon Program proposes to identify strategies that yield significant results within each at-risk population and encourage regions, states, partners, and others to develop and incorporate environmental justice approaches in their risk reduction strategies.

Target Populations for Environmental Equity Issues

The need to increase radon awareness among minority populations presents a special challenge. According to Herbert W. Nickens, MD, MA, Vice President for Minority Health, Education, and Prevention at the Association of American Medical Colleges, racial and ethnic minority groups in the United States (African American, Hispanic, Asian/Pacific Islander, and Native American) share several

EPA Map of Radon Zones


LEGEND
Zone 1 (greater than 4 pCi/L
Zone 2 (btw 2 pCi/L & 4 pCi/L)
Zone 3 (less than 2 pCi/L)

Homes with elevated radon levels have been found in all three zones. All homes should be tested regardless of geographic location. Consult EPA's Map of Radon Zones document (EPA-402-R-93-071) before using this map.

characteristics. These include being a small proportion of the overall population; having a history of past discrimination; and including many socioeconomically disadvantaged individuals who feel disenfranchised from the rest of society.[12] Racial and ethnic minorities currently comprise one-fourth of the U.S. population, and are projected to represent about one-third by 2010. Nickens cites a number of difficulties in effectively conveying environmental risk communication messages to minority populations. These difficulties may include lower education levels, language barriers, economic pressures and differing priorities for health information.

The EPA Radon Division strives to improve minority outreach efforts through cooperative partnerships with national minority organizations such as the National Medical Association (NMA), representing African American physicians, and the National Coalition of Hispanic Health and Human Services Organizations (COSSMHO), serving the health needs of U.S. Hispanic populations. In addition, last year the Radon Environmental Equity Team met with the regional directors of the National Association for the Advancement of Colored People (NAACP) to discuss mutual environmental health concerns. The Environmental Equity Team also sponsored an Asian roundtable discussion to devise strategies on raising the level of radon awareness among Asian and Pacific Islander communities.

As indicated in an article on EPA's radon outreach strategy, "[N]ational-level messages prepared for an `average audience', consisting of people at middle income and education levels, may not spark the interest of low-income and low-education populations. These `generic' messages also may not be appealing and effective in prompting action among minority audiences." The article cites a basic communications model which could be readily applied to minority populations. The model entails having a credible source involved in minority outreach. This source conveys a message — "test for radon" — through selected channels of communication (e.g., mailings, office appointments, public hearings, health fairs, background materials) to reach the intended audience.[13]

ABOUT THIS REPORT

In 1993, ASTHO joined the EPA Radon Partnership, to increase state health agency awareness of radon as a human health hazard and to assist states in promoting awareness, testing and mitigation of the radon hazard. This ASTHO report addresses outreach strategies which can increase radon awareness among minority and economically disadvantaged communities, identifies ways state health agencies can participate in increasing radon awareness, and examines how state radon activities can be more effectively linked with other state public health programs.

This report, building on ***The Future of Public Health,*** seeks to encourage stronger communication between environmental health and public health programs on public outreach strategies. This includes examples of how linkages between these programs have proven effective in reaching out to target communities.

This ASTHO report builds on ***Environmental Equity and Radon***, the CRCPD survey results, and other radon awareness efforts focused on high-risk populations to help fulfill the objectives of ***Healthy People 2000***. The report discusses strengthening state radon outreach efforts through collaboration with other state health programs, and addresses key components of better recognizing and appreciating the nuances of minority health outreach, both in public awareness messages and direct contacts.

The primary audience of the report includes senior state public health officials, state radon program coordinators, and staff of state health and environmental agencies. The report provides insights into developing collaborative partnerships between state radon programs and other state health agency programs to reach underserved populations with information about radon as a significant public health threat.

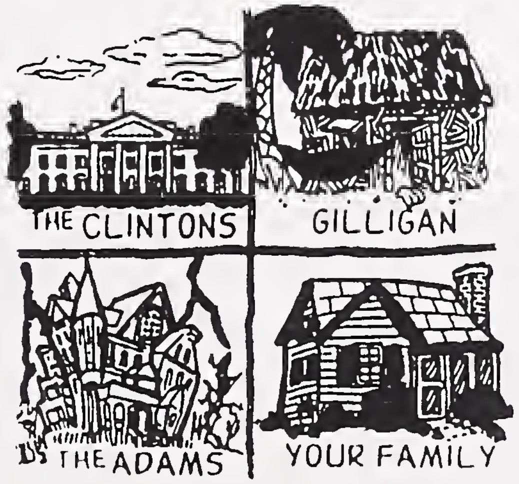
Methodology/Scope of the ASTHO Project

ASTHO's environmental health staff contacted a representative sampling of the 57 state and territorial radon agencies (including the District of Columbia) about their current and/or planned outreach activities for minorities and low-income populations. Division directors or spokespersons were interviewed about the scope of state activities, materials used, and collaboration with other state agencies. A cross-section of states from all 10 EPA regions was selected. In choosing potential interviewees, preference was given to states with areas classified as Zone 1 by EPA. A proportionate ratio was sought among radon divisions within health departments, those under environmental agencies, and those states which combine these functions.

Staff also contacted other programs in state health agencies that regularly engage in outreach efforts to the target environmental equity populations. These programs include Women, Infants and Children (WIC) programs; minority health programs; Maternal and Child Health (MCH) offices; and tobacco control units. Representatives of these divisions were selected on the basis of state health agency location and geographic diversity. They were asked to address what outreach activities they are involved in, what special challenges have been encountered, and whether radon awareness information could be integrated with their mandated messages. Several interviewees offered comments and examples incorporated in the report's section on collaborative strategies with other state health programs; most shared insights and ideas on basic strategies for outreach to the target populations.

The interview process was semi-structured and aimed at eliciting description and evaluation. Questions were open-ended to help ensure that the interviewees' perceptions were guiding the discussion. By synthesizing the experiences, recommendations and perspectives shared during the interviews, this report presents strategies for how state health officials to more effectively communicate the health threats of radon to the nation's "broadest and most complex constituency."

FIND THE FAMILY WITH THE RADON PROBLEM.



THE ONLY WAY TO KNOW IS TO TEST. TEST YOUR HOME TODAY.

CALL 1-800-SOS-RADON

EPA

ACTIVITIES AND OUTREACH EFFORTS: POTENTIAL COLLABORATIONS

Outreach: "Any program designed to extend services to those not usually accommodated by an organization."[14]

STATE HEALTH AGENCY OUTREACH PROGRAMS

A number of state health agency programs regularly conduct outreach activities to target to increase their impact. The programs included in this report, described below, were chosen for their experience in outreach to minority communities and their relevance to radon control.

WIC

The Women, Infants and Children Program (WIC), through funding from the U.S. Department of Agriculture, provides health and nutrition services to prevent health problems caused by poor nutrition. It offers supplemental food to pregnant, postpartum, and breast-feeding women, and children who live below 185 percent of the federal poverty level. WIC, as a federally funded and state-administered health services program, has local offices throughout each state. Participants are provided customized food packages and/or vouchers redeemable at grocery stores for certain foods (e.g., dairy products, cereal, infant formula). This program also serves as a "gateway" to other public health services, including prenatal care, Medicaid, and immunizations. Participants often attend WIC-sponsored counseling sessions on such issues as smoking and alcohol and drug abuse prevention. WIC is therefore uniquely situated to convey information to a targeted high-risk audience. "Outreach and referral mechanisms are vital for informing the public about the availability of WIC," begins Colorado's ***WIC Outreach and Targeting Manual*** in outlining the program's outreach activities.[15]

Maternal and Child Health (Title V)

Maternal and Child Health (MCH) programs serve women, children, and adolescents with the delivery of health services and development of policies to promote health. Several state MCH offices supervise the operation of WIC programs, while most are linked to WIC through the mutual objectives of improved health outcomes for women and children. MCH programs are federally funded through Title V of the Social Security Act and administered on the federal level by the Health Resources and Services Administration (HRSA) Bureau of Maternal and Child Health. The Title V mission is accomplished by planning, evaluating, promoting, and providing needed health care services for eligible individuals. MCH services include newborn screening, prenatal and pediatric care, immunizations, and family planning.

Minority Health Programs

State minority health programs emphasize access to culturally competent services and community based care. In most states, official minority health programs — whether offices, commissions, councils, centers, branches, or other units — have been established either through executive or legislative branch action to promote minority health priorities at the state level. All 16 of the state minority health programs interviewed for the report agreed that targeted communities must be consulted early and allowed a participatory role in addressing health care problems.

The federal Office of Minority Health (OMH), established in 1985, helps coordinate and advocate programs and policies for the improvement of health of African Americans, Asian Americans/Pacific Islanders, Hispanics, and Native Americans. Along with addressing key minority health problems (e.g., cancer, diabetes, HIV/AIDS), OMH also works on increasing health care access for minorities. Its activities to achieve this goal include education, policy, and demonstration projects.

Tobacco Control Outreach Efforts

As discussed in ***Smoking and Health in the Americas***, a 1992 Surgeon General report prepared in collaboration with the Pan American Health Organization, tobacco control programs have evolved over the past 25 to 30 years within state health agencies as all levels of government have increasingly joined voluntary health agencies in tobacco control activities. [16] State tobacco control programs have implemented and supported many activities to reduce the availability and use of tobacco, most featuring development of coalitions to address state and local policies relating to tobacco access. The programs particularly emphasize reducing tobacco use by youth and racial and ethnic minorities. The Center for Disease Control and Prevention's (CDC) Office on Smoking and Health is designated as the lead federal agency. Recognizing a strong link between radon and smoking as the two major causes of lung cancer, some state radon divisions are recognizing opportunities for collaboration with tobacco control program staff.

OUTREACH EFFORTS

Various approaches to outreach are used for minority and low-income communities by state radon divisions and other state health programs. Approaches described here include community assessment, planning to prioritize health issues, developing culturally and linguistically appropriate materials and personnel; actively involving community leaders, organizations, and volunteers; organizing a variety of one-on-one contacts; and promoting interagency collaborations.

Overall Prioritizing of Outreach Among State Radon Divisions

Of the 27 state radon divisions contacted for this report, seven pursue highly active outreach efforts to minority and low-income populations, nine conduct more moderate levels of outreach, and the remainder have little or no outreach activity. Reasons for limited activity were given as scarce funding and personnel resources, low ambient radon levels, little presence of target populations, and competition with higher profile health issues. For example, Washington's radon program was eliminated in that state governor's budget in 1994.

> *Successful outreach to high-risk populations happens when it is a priority, not through business-as-usual operations.*

Some states indicated that they do not specifically address targeted radon outreach. Reasons offered include the perception that generic materials and a general "one-size-fits-all" public awareness approach is preferable. Others also mentioned that while they do not proactively disseminate outreach information, concerned citizens can request it on their own initiative.

Outreach Techniques for Targeted Low-Income Communities

Several states use this approach even with low-income residents not necessarily belonging to minority communities. For instance, Vermont has no substantial minority presence. Only three respondents to a state radon survey conducted two years ago identified themselves as African American, and potential efforts involving Vermont's relatively sizeable Native American population are hampered by the tribe's sovereign status under federal law. Since Vermonters tend to be privacy-oriented and suspicious of government intervention, the state radon outreach program works with private health care organizations rather than focusing on government activities. Staff from community organizations make home visits to senior citizens and other "shut-in" clients in primarily rural areas, and provide radon information to clients when visiting.

> *Effective outreach to targeted communities involves a customized approach.*

In Massachusetts, a general low-income population outreach project being developed is a model program for housing mitigation. The Massachusetts radon division works with a weatherization program to get radon information to low income clients, and has developed linkages with anti-poverty groups. Maine's radon program plans to create a geographic classification scheme addressing income levels to target state radon-testing efforts. Arizona's radon division is developing plans to distribute a privately prepared do-it-yourself guide intended to save money on mitigation expenses, ***Protecting Your Home from Radon: A Step-by-Step Manual for Radon Reduction***, to the state's public libraries. The state's low-income population is expected to benefit since the publication normally costs 35 dollars.

Community Assessment

Just as a long journey begins with a single step, effective outreach begins with understanding how much a targeted community already knows. A number of state initiatives feature efforts to clarify community interest in and knowledge of public health efforts. For example, the New Jersey radon program assisted in preparing the Center for Research and Public Policy's 1992 statewide report ***Radon Awareness Study and Needs Assessment Among Low Income and Low Income Disabled Citizens for Information, Testing, and Mitigation Services***, which verified that low-income groups tend to have lower awareness of radon health risks.

> *It is important to identify existing knowledge and needs at the outset.*

The University of Connecticut helped that state radon program create a questionnaire to assess minorities' knowledge of environmental health issues, including radon, which is being field-tested. Florida's radon program hopes to identify more precisely its minority and low-income areas using sources such the state Department of Community Affairs.

Several state minority health programs have engaged in specific assessments of environmental health risks to minority communities. Through an EPA grant, the Arkansas Office of Minority Health is examining environmental equity issues near the Texarkana border. Massachusetts' Office of Minority Health is involved extensively with fish contamination problems and lead poisoning, while Oregon's program has focused more on hazardous substances and water contamination.

Other state minority health programs use less traditional methods to seek public input on health priorities in minority communities. Washington's Office of Minority Affairs held a public forum in Seattle in 1994 to gauge leading health concerns, and the Virginia Office of Minority Health held town meetings across the state, in central community places and involving local leaders. Radon was raised in community forums as a health issue. Arkansas' Office of Minority Health established four regional task forces corresponding to the state's congressional districts to assess how it could impact minority health issues, and North Carolina's Office of Minority Health performed a health services assessment survey to measure both minority health problems and needs.

Planning

> *Long-range planning can effectively address outreach activities and how they can best be implemented.*

At the state level, planning which distinguishes health issues as a priority and subsequent dedication of resources to an initiative can increase public awareness and activities to specific health risks. Michigan's ***Healthy Michigan 2000 Strategic Plan*** emphasizes minority health issues in Michigan and names radon as a priority. It recommends increased public education and outreach materials for radon and other issues.

The Utah Ethnic Health Project spearheaded an Ethnic Strategic Plan — organized by the categories Promotion, Prevention, Services, and Data and Surveillance Needs — which pinpointed crucial health issues and identified the proper state agencies to address them.

Culture and Language Appropriateness

> *An effective outreach message is conveyed to the targeted community in a clear and understandable manner.*

A number of states recognize this need by providing educational materials in both linguistically and culturally appropriate forms. Most states not actively involved in minority outreach at least have available EPA's Spanish translations of radon information. Connecticut and New Mexico have also prepared their own fliers in Spanish for public distribution. Some states have initiated bilingual public awareness outreach efforts using written and spoken materials. Connecticut is developing public service announcements for Spanish-speaking radio stations, and will translate a slide presentation on radon prepared by the University of Connecticut Cooperative Extension System into Spanish.

Florida's approach includes general distribution of radon information in Spanish, and seeks interpreters to translate information for residents who speak Caribbean dialects, especially Haitian. Other states have prepared radon information in other languages. The District of Columbia, for example, uses fliers in Chinese, Korean, and Vietnamese.

California's Office of Multicultural Health maintains a database, the Multicultural Health Information Network, for communicating with community-based ethnic organizations. Other state minority health programs interact extensively with minority-centered groups such as churches, civic associations, and health clinics.

For Native American communities, specifically Native American children, several states use Idaho's ***Learning About Radon: A Part of Nature*** mentioned in this report's introduction. The English language publication incorporates the Native American perspective of living in harmony with the earth. The story focuses on humanity's strong bond with nature while explaining that radon, while "a part of the wonder of our planet", can be harmful at elevated levels and may need to be reduced indoors.

Several interviewees shared "lessons learned" in preparing culturally appropriate materials. For example, one radon program coordinator recalled their preparation and distribution of a publication for Chinese residents warning about radon. The publication's cover included a skull and crossbones, but the intended impact of the publication was diminished because the illustration was colored in red, considered by many Chinese to be a joyful, not threatening, color.

Bilingual/Bicultural Personnel

A number of states already recognize the importance of selecting program staff from the culture of the target population, speaking its language. The New Jersey radon program recently recruited a Spanish-speaking person for its hotline, as has the District of Columbia program. New York is devising an interactive computer system on radon information to be placed at public locations throughout the state, to include Spanish translations. The Iowa WIC program is recruiting Spanish-speaking staff to address the growing Hispanic population there.

The most effective messengers reflect the target population.

Tobacco Control staff work with churches and pastors to get their message out, and recruit outreach workers from the surrounding neighborhoods, recognizing the importance of keeping outreach efforts locally relevant and making members of the community active players. Tobacco control staff note that targeted communities must set the agenda and that state officials should "come in with ears, not with mouths" to help achieve goals. This view was voiced by several state tobacco control units and minority health programs.

Reaching Out to Communities, Institutions, and Individuals

Community Involvement. WIC employees go out into the client communities to increase public awareness of the services they offer, and often become personally involved with local groups such as churches and hunger coalitions, and provide information booths at health fairs. Surveys of WIC recipients are another constructive means of directly gauging public responsiveness. Colorado's program uses surveys and "focus groups" to communicate directly with clients about their needs and level of awareness of WIC.

Various techniques can be used to contact individuals in targeted communities directly.

Volunteers. Oklahoma's MCH Office is currently trying to initiate a volunteer outreach effort based on an established program in Texas which works with the Volunteers in Service to America (VISTA) to increase the number of WIC enrollees in Oklahoma. The Oklahoma program will be a "shared-cost" initiative, involving the recruitment of WIC and Aid to Families with Dependent Children (AFDC) recipients to go door-to-door in targeted communities.

Institutions. A number of state programs have initiatives to work in communities and develop partnerships with community institutions and leaders. As community-based organizations, churches enjoy high levels of trust and esteem in African American communities, where they are viewed as places of refuge, to discuss concerns, and to seek guidance. Even in working with institutions, personal contacts are invaluable. For example, the District of Columbia (DC) radon staff once mailed letters to local churches to enlist their help with outreach efforts, but received a poor response. It wasn't until the staff personally visited the churches and spoke with the pastors that they made considerable progress with reaching out to local congregations. In other community-linked efforts, DC staff members go out into communities, and have worked closely with local organizations such as the Chinese Benevolent Center, Bell Multicultural School, and Indochinese Community Organization. Staff obtained lists of multicultural contact organizations and churches from the city's Offices of Asian and Pacific Islander Affairs and Latino Affairs.

Door-to-Door Contacts. The Connecticut radon program funds a project of the Hispanic Health Council (a social services agency) providing door-to-door outreach to Hispanic citizens in heavily populated, high-risk areas, and assessing the effectiveness of Connecticut's Spanish-language outreach materials. The Nevada Public Information and Health Division coordinates a United Way-funded program for lay health workers making door-to-door visits to expectant mothers to make them aware of available support services, and follow up with them. This Nevada division also targets zip code areas with high poverty rates to establish a "one-stop shopping" model for health services, and plans to increase access to immunizations by setting up mobile immunization clinics in low-income communities.

West Virginia is increasing its outreach efforts through a statewide network of family outreach workers. "The outreach process means constantly coming up with new ideas," explains a spokesman for West Virginia's Office of Community and Rural Health Services. Nine regional program field specialists each supervise at least four family outreach workers who regularly visit homes selected from Medicaid lists to deliver health promotional materials. Residents not at their homes receive door knob tags containing basic information. This personal approach conveys concern for the health needs of the targeted families, enables the workers to immediately hear and answer questions, and ensures that residents actually receive the information.

Mailings. State WIC offices regularly employ mass mailings to expand their clientele and make eligible individuals aware of their services. Missouri's WIC program receives a monthly listing from the state's social services database and send postcards with a toll-free information number to those not enrolled in WIC. Missouri also sends "paycheck stuffers" listing WIC eligibility guidelines to employers. Florida's WIC program includes information in state unemployment checks and also cross-matches its records with the state's Medicaid database to identify other possible contacts. Florida concentrates its WIC outreach efforts in urban areas, like Miami, where there is a large presence of Hispanics and Haitians.

The Iowa WIC program sends out fliers with Aid to Families with Dependent Children (AFDC) checks, targeting pregnant women and provides a toll-free number. The New Hampshire WIC program conducts an annual mailing to 3000 individuals and organizations, including health care providers, soup kitchens, and high schools.

Word-of-Mouth Referrals. Some WIC programs find personal references to be the most effective outreach method. According to a New Hampshire survey of WIC participants, 60 percent of WIC enrollees learned about the program through family members and friends. A 1994 Utah survey indicated that 65 percent of its WIC participants heard about the program through family members. This significantly contrasts with 4.4 percent who learned about it through pamphlets and 3.9 percent through media sources.

Several WIC programs will try actively promoting word-of-mouth referrals. New Hampshire is planning a Telefriend Campaign, similar to an effort in Massachusetts, whereby WIC participants actively encourage others to enroll. Iowa conducted a "Bring a Friend" campaign when one month is designated for participants to share WIC information. Montana's version of this effort makes participants who bring friends to WIC offices eligible for prizes.

Collaboration with Community-Based and Voluntary Organizations

The Pennsylvania radon program regularly issues mini-grants to non-profit organizations to help fund activities such as presentations in target communities. Pennsylvania also carries out a Newborn Baby Project which gives new parents radon information along with a formal certificate of congratulations.

To communicate with relatively inaccessible populations like the Hmong (tribespeople originally from Laos), who have only recently developed a written language since immigrating to the United States, the Minnesota radon program has developed "baby showers" co-sponsored by the Minnesota American Lung Association. Showers are held on Saturday mornings for pregnant women and their children. Radon information is handed out as "door prizes" along with more conventional gifts.

> *A proven outreach strategy: forming coalitions with organizations already accessing the target communities.*

Oregon's Minority Health Program works as a partner with targeted communities to deliver health messages. It recruited and trained respected members of the state's low-income Hood River community to be "capacitators" in delivering preventive medical services to local children. Minority health programs in other states have nurtured the formation of coalitions and brought together minority groups with mutual goals.

Virginia's minority health program helped link two Richmond-based African American groups which both address nutrition issues. Tobacco control units have demonstrated a willingness to form diverse community-oriented coalitions to foster a multifaceted approach to lung cancer prevention. In Maryland, for instance, the tobacco control unit is trying to establish community-oriented coalitions with such groups as drug and alcohol abuse organizations.

The New York Tobacco Control Program organized a symposium on tobacco control and minorities, striving to involve ethnic organizations and other nontraditional entities in setting the agenda. Such community linkages draw in new segments of the population, and make the groups active stakeholders. Iowa's tobacco control spokesperson addressed the need for radon programs to build strong working relationships with others on issues of mutual concern, and encouraged coalition-builders to bring traditionally untapped voices and faces to the table.

Maximizing Resources

> *Another proven strategy: collaborate with a variety of other governmental units.*

A number of states promote awareness of health and environmental resources by encouraging interagency referrals and by establishing networks for referring clients with specific health questions or problems. Many state radon programs work with local health departments and other government agencies to get the radon message out. The following examples illustrate some of the ample opportunities available for radon programs to collaborate with groups engaged in health outreach.

Kentucky, for instance, works closely with the state's cancer control agencies which focus on that state's African American communities. Several state radon programs already recognize and use linkages with WIC. Colorado, for example, arranges to have EPA radon information in both English and Spanish distributed at WIC centers. Wyoming WIC recipients are required to attend a one-hour presentation on health issues, including radon, when picking up WIC checks. Radon test kits are made available for WIC participants, with 35 percent being returned for analysis. Montana WIC has developed broad-based but selective criteria for promoting other health issues in conjunction with WIC — for instance, not including voter registration services or other non-health services, but including issues related to the WIC mission of supporting general preventive health services for women and children.

WIC programs often illustrate a "one-stop shopping" model, having forged linkages with agencies and organizations working on such issues as nutrition education, prenatal care, and childhood immunizations. WIC has developed programs to serve such diverse groups as Hispanics, Native Americans, Vietnamese, Hmongs, and African Americans, and often have informational materials available on nutrition education, prenatal care, childhood immunizations, and lead poisoning abatement.

The Idaho MCH/Children's Special Health office also links with other agencies, and makes radon awareness materials (handouts, coloring books, posters) available at child health clinics throughout the state. Collaborations emphasize integrating health messages for greatest effectiveness, and help with practical considerations like the relatively limited staff and budget of the Idaho Health Department.

Arizona's Community Relations Division encourages health awareness partnerships at the state level, such as working with the Arizona Department of Environmental Quality to sponsor fairs where environmental health materials are made available along with other health-related information. The draft Arizona Strategic Health Plan addresses the benefits of such sustained collaborations.

The Florida WIC coordinator outlined the importance of letting other agencies know the benefits of partnerships for each agency. Florida's WIC Program was able to negotiate use of office space from the state Medicaid program by emphasizing the "one-stop shopping" angle and the cost-effectiveness of space sharing.

The Wyoming radon program provides a successful example of collaboration with the WIC program using the "win-win" approach. The radon director, in securing an agreement with the Wyoming WIC program to promote radon awareness information, provided these offices with free magazine holders so that WIC could better display their outreach materials for public use. The condition for the offices accepting these holders is that during certain times of the year (e.g., Radon Action Month) they contain only radon awareness materials.

To begin shifting from a generic public awareness mode to a more direct community-oriented and culturally sensitive outreach approach, state radon programs can unite their technical expertise with coalition-building skills. This includes establishing meaningful linkages with state health programs serving the same constituencies. As a Chinese proverb counsels, "You can't clap with one hand."

According to COSSMHO's report ***Delivering Preventive Health Care to Hispanics: A Manual for Providers***, "It is important to keep in mind that just like non-Hispanic whites, Hispanics are a heterogeneous group, despite the fact that they share a common language and selected aspects of the Hispanic culture." As the experiences of the agencies interviewed underscore, community involvement is essential to ensure the cultural appropriateness and success of a given program. Effective outreach means recognizing and appreciating the unique cultural mores and priorities of each community. Many aspects of cultural diversity come into play, including those relating to age, family life, spiritual values, the degree of assimilation into the mainstream American culture, and values.[17]

Effective outreach requires appreciation of diversity within racial and ethnic minority groups. This means looking beyond the overarching values and similarities from a shared heritage towards a community's differences — its distinctive values, lifestyle, language nuances, and ethnicity. State contacts interviewed for this report proposed a number of general guidelines for improving the relevance of public health messages. They stressed carefully tailoring written literature to the needs, linguistic background, and values of a given community. Special consideration needs to be given to the socioeconomic status, level of education, and length of time in the United States (e.g., recent arrival, second generation) for target communities. Some "rules of thumb" for developing culturally appropriate outreach strategies were repeatedly offered by participants in interviews for this ASTHO project. They are:

- Use and project a client-centered approach.
- Earn the trust of the community members.
- Enlist the active assistance of both formal and informal community leaders.
- Provide adequate support without dictating what should be done.
- Work with community members to understand questions, concerns and knowledge base, and develop educational materials specifically addressing community needs.
- Respect the community's inherent value system.
- Challenge your own assumptions and don't think you or your program are the one and only expert.
- Meaningfully educate the community without either patronizing or talking down to its members.
- Let the community guide, listen to its members, walk in their shoes.

Collaborative efforts with other governmental and community programs already serving the targeted communities can strengthen outreach efforts. These linkages help ensure that the message is delivered, heard, and acknowledged where necessary. Issues commonly overlooked can be effectively promoted in conjunction with more prevalent, better publicized, or immediately felt concerns being addressed by other programs.

Some of the approaches identified in this report which could be undertaken by state health agencies include:

- Assessing Community Needs and Priorities
- Planning for Allocation of Resources
- Reaching People with Materials Relevant to Their Language and Culture
- Using Culturally Competent Personnel
- Reaching Out to Communities and Community Institutions
- Collaborating With Diverse Partners
- Maximizing Resources Through Interagency Collaborations

Interviewees stressed the importance of settling basic organizational issues from the outset in developing collaborative partnerships. They recommended negotiating with prospective collaborative agencies and writing down specific shared objectives to develop a formal memorandum of understanding. During these negotiations, it is important to establish where the agendas are already or might be compatible.

A successful collaboration requires developing a clear and common vision of what the parties want to accomplish. Answering the following questions regarding the issues to be addressed will help to develop that vision:

- Which communities can and do we need to reach together? How?
- What are the responsibilities and boundaries for each partner in this effort? Who will do what?
- What do we want to accomplish together? How will things look different and better because of our work together? [18]

It is ASTHO's hope that the state radon divisions can draw on the examples and insights presented in this report, and use the suggestions to assist in developing minority outreach through alliances with state health programs that are already making deep inroads into targeted communities. Key public health challenges affecting traditionally disadvantaged communities will likely increase in the near future as those populations continue to grow. These challenges include environmental equity priorities and assuring easier access to health care services and information. State health professionals involved in radon testing and mitigation must respond to these challenges meaningfully and effectively, by either continuing to pursue or initiating outreach strategies.

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APPENDIX A

ASTHO Radon Policy Statement

ASTHO POSITION PAPER ON THE ROLE OF STATE HEALTH DEPARTMENTS IN PROMOTING RADON AWARENESS, TESTING, AND MITIGATION

EPA, as well as the World Health Organization and the US Department of Health and Human Services, has determined that radon is a known human carcinogen (Class A), and estimates that between 7000 and 30,000 persons die of lung cancer each year because of radon exposure in their homes. EPA's Radon Division actively promotes awareness of radon and the need to test homes for its presence through its work with governmental and voluntary health agencies. To reduce health risks from radon exposure, radon levels at or above four picocuries per liter (4 pCi/L) should be reduced by one of several, relatively inexpensive, mitigation techniques. The entire program to reduce non-occupational exposure to radon is based on voluntary action by homeowners, stimulated by outreach and risk communication activities of governmental and private sector organizations.

Healthy People 2000: National Health Promotion and Disease Prevention Objectives, the 1990 consensus report issued by the United States Department of Health and Human Services (HHS), outlines national health promotion and disease prevention goals for the year 2000 and serves as a guidepost for planning and policy development at the state level. Its goal for radon is to "increase to at least 40 percent the proportion of homes in which homeowners/occupants have tested for radon concentrations and that have either been found to pose minimal risk or have been modified to reduce risk to health." In addition, **Healthy People 2000** sets a target of increasing by 50 percent the radon testing of homes inhabited by smokers and former smokers (because of the amplified threat of lung disease posed by a combination of smoking and radon).

Many State Health Agencies (SHAs) have a radon program in their organization; in other states, the radon program is located within the environmental protection organization. According to the 1994 survey results of the Conference of Radiation Control Program Directors (CRCPD), 73 percent of the general population is aware of radon but only 10 percent have actually tested for it. Among minority groups, seventy percent of Native Americans are aware of radon, only 14 percent have tested for it; fifty percent of African Americans are aware of radon, although 6 percent have done testing; 47 percent of Hispanics are aware of radon, six percent have done testing; and 46 percent of Asians are aware of radon, six percent have done testing. The importance of testing cannot be overstated, since no other way exists to determine the presence of elevated radon levels.

ASTHO believes that it is important for all SHAs to promote radon awareness, testing, and mitigation, regardless of the organizational location of the state's radon program. We also recommend that all SHAs promote radon-resistant new construction techniques, encourage radon disclosure during real estate transactions, and address inequity of action among minority populations. ASTHO encourages states to work with EPA and state radon offices as a resource for radon awareness and mitigation health education materials.

Approved by ASTHO Executive Committee
April 28, 1995

APPENDIX B

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ABOUT ASTHO

The Association of State and Territorial Health Officials (ASTHO) represents the public health agencies of each of the 50 states, District of Columbia and seven US Territories and is engaged in a wide range of legislative, scientific, educational, and programmatic issues and activities on behalf of public health. Its purpose is to formulate and influence sound national public health policy and to serve state health departments in the development and implementation of programs and policies to promote health and prevent disease.

ASTHO is governed by a ten member Executive Committee and is supported by a committee and task force structure whose members work on particular issues that affect the association and state health agencies. ASTHO's committees and task forces focus on a variety of public health concerns including environmental health, immunizations, health care finance, HIV/AIDS, injury control, tobacco, minority health, school health, and primary care. Committees, task forces, and affiliate organizations prepare reports and recommendations regarding ASTHO policy positions which are adopted by the Executive Committee.

ASTHO engages the expertise of a formally linked network of organizations dedicated to representing the concerns of state health departments. There are currently seventeen affiliated groups which represent directors of divisions within the state health departments and include Nutrition, Maternal and Child Health, Dental, Laboratory, Epidemiology, AIDS, Nursing, Vital Records and Health Statistics, Public Health Education, Health Facility Survey Agencies, Vector Control, Chronic Disease, Risk Assessment, Social Work, Local Liaison and Public Health Information and Emergency Medical Services. These associations function independently yet cooperate very closely with ASTHO to develop and promote sound public health policy.

ASTHO's Environmental Health project is intended to improve communication between the public health community and the environmental protection and restoration community; to encourage assessment and surveillance of environmental health areas within the public health community; to facilitate access to mechanisms which will assure environmental health, including educating the public health community about environmental issues and how to communicate them to the public.

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